

DEFINITIONS

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) OR FEDERAL AMBIENT AIR QUALITY STANDARDS means the ambient air quality standards for criteria pollutants adopted by the Administrator pursuant to the Clean Air Act § 109 (42 U.S.C. § 7410) and codified at 40 CFR Part 50 as in effect on ~~November 17, 2016~~ January 27, 2025.

310 CMR 6.00: AMBIENT AIR QUALITY STANDARDS FOR THE COMMONWEALTH OF MASSACHUSETTS

310 CMR 6.04 : Standards(1) Oxides of Sulfur (sulfur dioxide).(a) Primary Ambient Air Quality Standards for Oxides of Sulfur (sulfur dioxide).

1. The level of the primary one hour ambient air quality standard for oxides of sulfur is 75 parts per billion (ppb, which is 1 part in 1,000,000,000), measured in the ambient air as sulfur dioxide (SO₂).
2. The one hour primary standard is met at an ambient air quality monitoring site when the three-year average of the annual (99th percentile) of the daily maximum one hour average concentrations is less than or equal to 75 ppb, as determined in accordance with 40 CFR Part 50, Appendix T.
3. The level of the standard shall be measured by a reference method based on 40 CFR Part 50, Appendix A or A-1 or by a federal equivalent method (FEM) designated in accordance with 40 CFR Part 53.

(b) Secondary Ambient Air Quality Standards for Oxides of Sulfur (sulfur dioxide).

1. ~~The level of the secondary three-hour ambient air quality standard for oxides of sulfur is 0.5 parts per million (ppm), not to be exceeded more than once per calendar year. The three-hour averages shall be determined from successive non-overlapping three-hour blocks starting at midnight each calendar day and shall be rounded to one decimal place (fractional parts equal to or greater than 0.05 ppm shall be rounded up). The level of the annual secondary national ambient air quality standard for oxides of sulfur is 10 parts per billion (ppb), measured in the ambient air as sulfur dioxide (SO₂) by a reference method based on 40 CFR 50, Appendix A-1 and Appendix A-2, or by a Federal Equivalent Method (FEM) designated in accordance with 40 CFR 53.~~
2. ~~Oxides of sulfur shall be measured in the ambient air as sulfur dioxide by the reference method described in 40 CFR Part 50, Appendix A or by a federal equivalent method designated in accordance with 40 CFR Part 53. The annual secondary standard is met when the 3-year average of the annual SO₂ concentration is less than or equal to 10 ppb, as determined in accordance with 40 CFR 50, Appendix T.~~
3. ~~To demonstrate attainment, the second-highest three-hour average must be based upon hourly data that are at least 75% complete in each calendar quarter. A three-hour block average shall be considered valid only if all three hourly averages for the three-hour period are available. If only one or two hourly averages are available, but the three-hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of 310 CMR 6.04(1), then this shall be considered a valid three-hour average. In all cases, the three-hour block average shall be computed as the sum of the hourly averages divided by three.~~

(2) Particulate Matter.(a) Primary and Secondary Ambient Air Quality Standards for PM₁₀:

1. The level of the primary and secondary 24-hour ambient air quality standards for particulate matter is 150 micrograms per cubic meter (µg/m³), 24-hour average concentration. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³, as determined in accordance with 40 CFR Part 50, Appendix K is equal to or less than one.
2. For the purpose of determining attainment of the primary and secondary standards, particulate matter shall be measured in the ambient air as PM₁₀ (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) by:
 - a. A reference method based on 40 CFR Part 50, Appendix J and designated in accordance with 40 CFR Part 53, or
 - b. An equivalent method designated in accordance with 40 CFR Part 53.

(b) Primary Ambient Air Quality Standards for PM_{2.5}:

1. The primary ambient air quality standards for PM_{2.5} are ~~12.09.0~~ micrograms per cubic meter (µg/m³) annual arithmetic mean concentration and 35 µg/m³ 24-hour average concentration measured in the ambient air as PM_{2.5} (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:
 - a. A reference method based on 40 CFR Part 50, Appendix L and designated in accordance with 40 CFR Part 53; or
 - b. An equivalent method designated in accordance with 40 CFR Part 53.
 2. The primary annual PM_{2.5} standard is met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to ~~12.09.0~~ µg/m³.
 3. The primary 24-hour PM_{2.5} standard is met when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 35 µg/m³.
- (c) Secondary Ambient Air Quality Standards for PM_{2.5}:
1. The secondary ambient air quality standards for PM_{2.5} are 15.0 micrograms per cubic meter (µg/m³) annual arithmetic mean concentration, and 35 µg/m³ 24-hour average concentration measured in the ambient air as PM_{2.5} (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:
 - a. A reference method based on 40 CFR Part 50, Appendix L and designated in accordance with 40 CFR Part 53; or
 - b. An equivalent method designated in accordance with 40 CFR Part 53.
 2. The annual secondary PM_{2.5} standard is met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 15.0 µg/m³.
 3. The 24-hour secondary PM_{2.5} standard is met when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 35 µg/m³.